



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/664,528	09/17/2003	Paul Keith Scherrer	71618	4295

7590 03/28/2005

Dennis V. Carmen
Eastman Chemical Company
P.O. Box 511
Kingsport, TN 37662-5075

EXAMINER

HOPKINS, ROBERT A

ART UNIT	PAPER NUMBER
----------	--------------

1724

DATE MAILED: 03/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/664,528

Applicant(s)

SCHERRER, PAUL KEITH

Examiner

Robert A Hopkins

Art Unit

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 6, 9-14 and 16-20 is/are rejected.
- 7) ☒ Claim(s) 4, 7, 8 and 15 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9-17-03</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9 line 2 recites "said strut". There is a lack of antecedent basis for "said strut" in previous claim limitations. Correction is requested.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,5,10-14,16-20 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Chalfant(851494).

Chalfant teaches an inertial separator comprising an elbow(1) having an internal wall, a fishbone separation enhancer comprising a plurality of longitudinally extending vanes(10) positioned across the direction of gas flow and spaced apart along the direction of gas flow, wherein the vanes are oriented downwards(see figure 1) in their longitudinal direction with respect to gravity such that separated particulate from the particulate containing gas flowing through the elbow runs downwards to a collection site. Chalfant further teaches wherein the vanes have a cross section having a height

Art Unit: 1724

greater than a thickness, the vanes mounted such that an axis through the height of the cross section is angled from the direction of gas flow by about 20 degrees to about 90 degrees. Chalfant further teaches wherein the elbow has a circular cross section. Chalfant further teaches wherein the elbow has a polygonal cross section. Chalfant further teaches wherein no spine is present and wherein the vanes are each fixed to at least one interior wall of the elbow. Chalfant further teaches a process for separation of droplets of liquid from a gas stream comprising directing the gas stream into a separator of claim 1, collecting liquid by contact of the droplets with the fishbone separation enhancer and walls of the elbow, and providing an exit gas stream which is depleted of liquid droplets.

Examiner notes the structure of Chalfant is to a spark arrester, however the apparatus limitations of claim 1 are met by Chalfant, and are fully capable of removing an entrained liquid from a gas.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2,3,6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chalfant(851494) taken together with Mcaferty et al(5882386).

Chalfant teaches all of the limitations of claim 2 but is silent as to wherein the vanes are of hollow construction and have at least one opening along a length thereof.

Art Unit: 1724

Mcaferty et al teaches a separator for separating liquid droplets from an air flow with an enclosed casing, wherein the vanes(12) are of hollow construction and have at least one opening along a length thereof. It would have been obvious to someone of ordinary skill in the art at the time of the invention to substitute a vane of hollow construction and have at least one opening along a length thereof for the angled vane of Chalfant in order to collect a greater amount of particulate or liquid from the airflow of Chalfant.

Mcaferty et al further teaches wherein the opening is along the entire length of the vane, the vane positioned such that the opening faces the direction of flow of the gas flowing through the enclosed casing.

Allowable Subject Matter

Claims 4,7,8,15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 4 recites "wherein said vanes are mounted on struts which extend from said spine, or from said elbow". Chalfant fails to teach vanes mounted on struts. The vanes of Chalfant are attached directly to the elbow. It would not have been obvious to someone of ordinary skill in the art at the time of the invention to provide wherein vanes are mounted on struts which extend from said spine, or from said elbow because Chalfant does not suggest such a modification.

Claim 7 recites "wherein a spine is present, and said vanes slope downward from said spine". Chalfant fails to teach a spine. The vanes of Chalfant are attached directly to the elbow. It would not have been obvious to someone of ordinary skill in the art at

Art Unit: 1724

the time of the invention to provide a spine, wherein the vanes slope downward from said spine because Chalfant does not suggest such a modification.

Claim 8 recites "wherein a spine is present, and said vanes slope downward towards said spine". Chalfant fails to teach a spine. The vanes of Chalfant are attached directly to the elbow. It would not have been obvious to someone of ordinary skill in the art at the time of the invention to provide a spine, wherein the vanes slope downward towards said spine because Chalfant does not suggest such a modification.

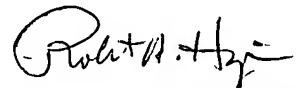
Claim 15 recites "said separator having a spine, said spine floatingly positioned within said elbow". Chalfant fails to teach a spine. The vanes of Chalfant are attached directly to the elbow. It would not have been obvious to someone of ordinary skill in the art at the time of the invention to provide a spine, said spine floatingly positioned within said elbow because Chalfant does not suggest such a modification.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert A Hopkins whose telephone number is 571-272-1159. The examiner can normally be reached on Monday-Friday, 7am-4pm, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Rah
March 21, 2005


ROBERT A. HOPKINS
PRIMARY EXAMINER
A.U. 1724